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UTILIZATION OF WHITE POTATOES ESTIMATES IN ACCORDANCE WITH THE 1949 GOAL

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As shown in the chart, the United States potato requirements call for a crop of about 350 million bushels per year (1949 goal). Consumption as food at the rate of about 115 pounds per capita should account for 282 million bushels, 80-1/2 percent of the total. On the basis of this figure and past experience, the amount of potatoes needed for food consumption in the unprocessed form is estimated at 256 million bushels. The export trade, which has taken several million bushels of potatoes per year during recent surplus-crop years, is expected to require only about 2 million bushels in 1949. Food processing will perhaps require 24 million bushels of potatoes, of which 20 million may be needed by potato chip manufacturers. The potato flour requirement may drop to about what it was before 1948: 2 million bushels of potatoes supply the normal amount of flour used in the domestic market. Production of flour for export to Europe during 1948-49, however, has taken many millions of bushels of surplus potatoes.

Seed needs are expected to take about 38 million bushels, leaving 30 million bushels for nonfood uses. Of the nonfood potatoes, about 18 million bushels are likely to be used in livestock feeding, with perhaps an increase in dehydration of cull potatoes for feed. The starch industry should require about 10 million bushels--for production of 60 to 70 million pounds of starch. This leaves 2 million bushels for fermentation and miscellaneous uses. Although alcoholic fermentation has consumed enormous quantities of potatoes during past years, the current abundance of molasses and grains points to a probable sharp decline in the tonnage of potatoes used by distilleries.

The data in the chart were obtained from the Bureau of Agricultural Economics and the Potato Division, Production and Marketing Administration, of the U. S. Department of Agriculture, from the National Potato Chip Institute, and from processors of potatoes in the food and starch industries.

The Eastern Regional Research Laboratory is actively investigating the industrial utilization of potatoes. The following publications describe some of the potato and potato starch research conducted at this Laboratory:

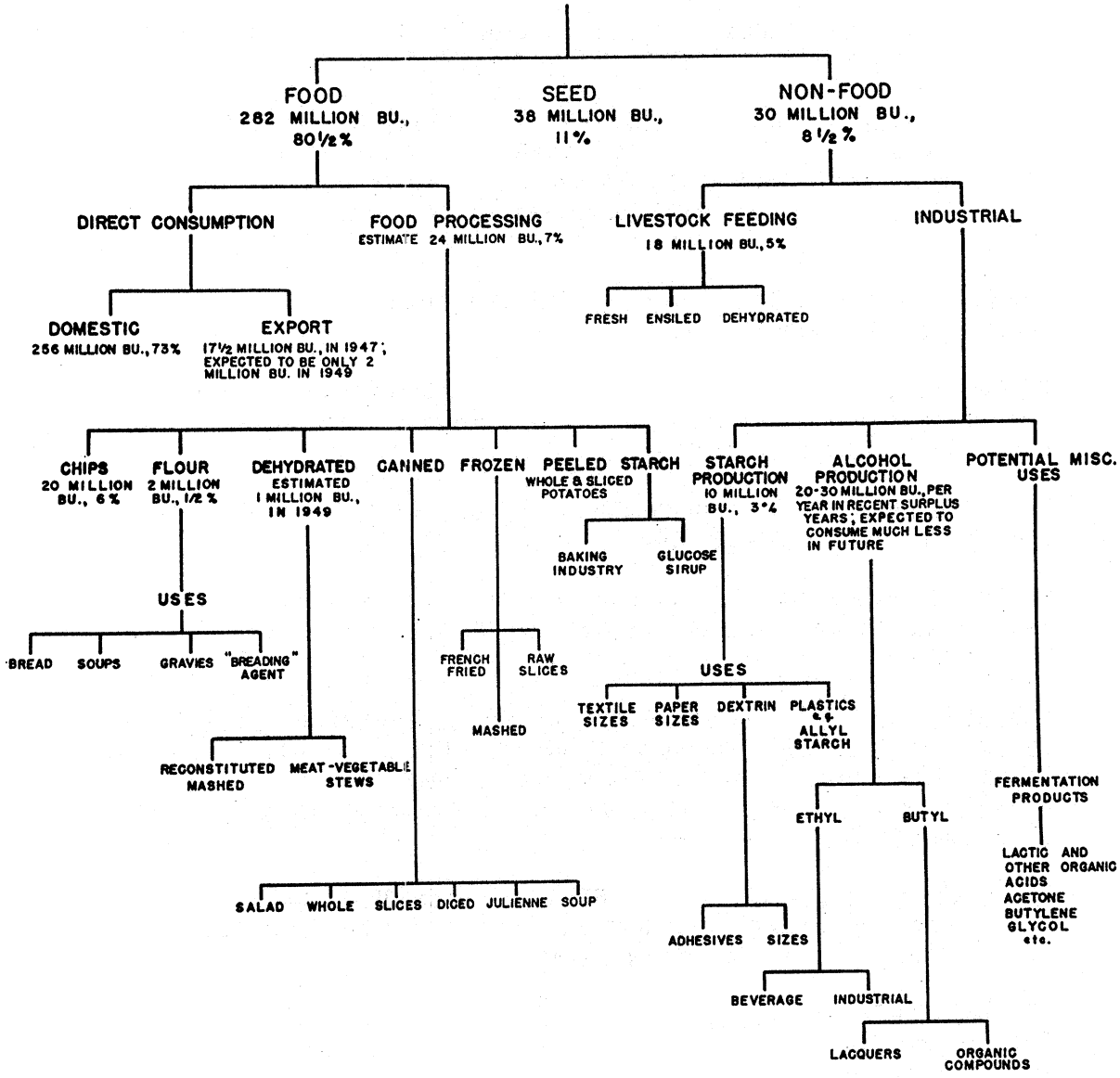
[1] One of the Laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

* Report of a study made under the Research and Marketing Act of 1946.

UTILIZATION OF WHITE POTATOES

ANNUAL UNITED STATES REQUIREMENT ABOUT 350 MILLION BUSHELS (1949 GOAL)

QUANTITY OF POTATOES AND PERCENTAGE OF TOTAL PRODUCTION GOING INTO EACH OUTLET GIVEN WHERE DATA OR ESTIMATES ARE AVAILABLE



EASTERN REGIONAL RESEARCH LABORATORY

BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

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SMITH, LEE T., and MORRIS, S. G., Dextrinization of Potato Starch with Gaseous Hydrogen Chloride. Indus. Eng. Chem. 36: 1052-1054 (1944).

MEISS, P. E., TREADWAY, R. H., and SMITH, LEE T., White Potato Starches. Ind. Eng. Chem. 36: 159-165 (1944)

TREADWAY, R. H. Industrial Utilization of Cull and Surplus Potatoes. The Amer. Potato Jour. 24: 361-374 (1947).

EDWARDS, PAUL W., HOERSCH, ALBERT JR., ACETO, NICHOLAS C., and ESKEW, RODERICK K., Utilization of Idle Equipment in Distilleries for Production of White Potato Flour. U. S. Dept. Agr., Bur. Agr. and Indus. Chem., AIC-190, (Eastern Regional Research Laboratory) (June 1948).

TREADWAY, R. H. Utilization of White Potatoes. The Amer. Potato Jour. 25: 300-302 (1948).

HOWERTON, W. W., and TREADWAY, R. H., Manufacture of White Potato Starch. Comparison of Batch and Continuous Processes. Indus. Eng. Chem. 40: 1402-1407 (1948).

WHITTENBERGER, R. T., and NUTTING, G. C., Potato-Starch Gels. Indus. Eng. Chem. 40: 1407-13 (1948).

REPORT OF PROCEEDINGS. Conference on Potatoes October 19-21, 1948. Eastern Regional Research Laboratory, U. S. Dept. Agr., Bur. Agr. and Indus. Chem.

EDWARDS, PAUL W., REDFIELD, CLIFFORD S., HOERSCH, ALBERT JR., and ESKEW, RODERICK K., Producing Feed and Flour from White Potatoes with Steam Tube Driers. U. S. Dept. Agr., Bur. Agr. and Indus. Chem., AIC-209 (Eastern Regional Research Laboratory) (November 1948) and CA-7 (March 1949).

TREADWAY, R. H., WALSH, MARGARET D., and OSBORNE, MADELYN F., Effects of Storage on Starch and Sugars Contents of Maine Potatoes. The Amer. Potato Jour., 26: 33-44 (1949).

WHITTENBERGER, R. T., and NUTTING, G. C., Effect of Phytohormones on Potato Growth and the Size of the Starch Granules. Plant Physiol. 24: 278-84 (1949).

NUTTING, G. C., and WHITTENBERGER, R. T., Potato Storage: Effect on the Paste Viscosity of the Starch. The Amer. Potato Jour. 26: 121-6 (1949).